Message

From: Fleisig, Erica [Fleisig.Erica@epa.gov]

Sent: 11/18/2020 6:37:07 PM

To: Buffo, Corey [Buffo.Corey@epa.gov]

Subject: FW: Selenium

KG, immediately added to the cc!

From: Beaman, Joe <Beaman.Joe@epa.gov> **Sent:** Wednesday, November 18, 2020 1:36 PM **To:** Fleisig, Erica <Fleisig.Erica@epa.gov>

Cc: Sengco, Mario <Sengco.Mario@epa.gov>; Kesler, Karen <Kesler.Karen@epa.gov>; Gallagher, Kathryn

<Gallagher.Kathryn@epa.gov>

Subject: RE: Selenium

Ok - great - thank you Erica!

From: Fleisig, Erica <<u>Fleisig, Erica@epa.gov</u>>
Sent: Wednesday, November 18, 2020 1:35 PM
To: Beaman, Joe <<u>Beaman, Joe@epa.gov</u>>

Cc: Sengco, Mario < Sengco. Mario@epa.gov >; Kesler, Karen < Kesler. Karen@epa.gov >

Subject: FW: Selenium

Joe, just a heads up that Mario is going to pass along to ND that we'd like you to be included in these discussions, along with Mario and Karen (and R8) as ND moves forward to design a sampling protocol and gather additional selenium data in ND waters/fish.

So, please expect some more discussions to come. Let us know if you have any questions! -Erica

Erica Fleisig

Team Leader, Regional Water Quality Standards Branch Office of Science and Technology, U.S. EPA (202) 566-1057

From: Wax, Peter N. <pwax@nd.gov>

Sent: Wednesday, November 18, 2020 12:07 PM **To:** Sengco, Mario < Sengco. Mario@epa.gov >

Cc: Wirick, Holiday <<u>wirick.holiday@epa.gov</u>>; Kesler, Karen <<u>Kesler.Karen@epa.gov</u>>; Aaron Larsen <<u>allarsen@nd.gov</u>>;

<u>inett@nd.gov</u> **Subject:** Selenium

Dear Mario:

Preliminary thinking about selenium. A dangerous thing with me [like an i386 with an unstable hard drive].

The State of ND is going to refresh its fish flesh data. Targeted for this work is Mercury and Selenium. Mercury for Human Health (eating) and Selenium for aquatic life.

I am looking to assemble a couple brilliant folks to bounce ideas off with the goal of improving the odds of yielding useful results. Or "best design" to likely yield the desired results – Desired outcome and actual Yield are a capricious couple.

Purely, voluntary and not an official type thing.

Ms. Kesler and Ms. Wirick have graciously offered to help set up the selenium flesh and WQ monitoring strategy and I was hoping to add a Rockstar and Nationals' fan to the list.

Recognized Selenium Deficiencies

Old fish data
Muscle only
Lake only
Adult eatable fish species
Water quality data mostly non-detects

Selenium Fixes

Collect a broader range of species: How many? Individual or homogenized? what species? Collect rivers, streams, creeks, lakes and reservoirs Collect whole, muscle, maybe ovum/ovaries Analytical procedures changes? Analytical addition of dissolved selenium?

Again, just looking to get folks thinking about it. Presently I do not have a lot of spare time (finishing my WQ standards review and figure out the 401 stuff) but "Spring" will come sooner than expected.

Never forget "The cavalry is always just around the corner".

Sincerely,

Peter

Peter N. Wax Special Projects Division of Water Quality

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